TITLE OF THE INVENTION

Cooking Grill Liners

CROSS-REFERENCE TO RELATED APPLICATIONS

This is a continuation-in-part of co-pending application Serial No. 10/349,343, filed January 22, 2003.

STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT

Not applicable

INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC

Not applicable

BACKGROUND OF THE INVENTION

Field of the Invention

This invention relates generally to the field of grill and barbecue-type cooking and more particularly to disposable preformed aluminum foil cooking grill liners which substantially conform to and mate against the opposing grilling surfaces of well known electric grilling appliances.

Description of Related Art

Electric cooking grills having both a stationary and a moveable heated grilling surface pivotally connected together have become quite popular. One such device bears the trademark "GEORGE FOREMAN" grills having electric heat provided to both stationary and pivotably moveable grilling surfaces so that cooking heat is applied to both the top and bottom surfaces of food placed therebetween. These GEORGE FOREMAN-type grills also include an inclined orientation of the stationary or lower grilling surface with

raised ribs extending longitudinally downwardly from the higher to the lower ends so that cooking juices including undesirable fat material will drain downwardly toward and outwardly from a downturned juice draining margin disposed at the lowest point of the stationary grilling surface.

The popularity of these GEORGE FOREMAN-type grills and others of a similar configuration and nature have become extremely popular and are found in a broad variety of sizes and forms. However, a common thread is the stationary and preferably inclined cooking surface and the pivotally moveable or openable upper grilling surface which come together to inject heat from both top and bottom sides of the food to be cooked. However, cleaning of these grilling surfaces is somewhat problematic. These grilling surfaces are generally not removable and therefore, to the extent required, cleaning must be done dealing with the entire cooking grill itself which may include non-water proof delicate portions which cannot be submerged or exposed to extensive quantities of water.

Instructions accompanying the use of these GEORGE FOREMAN grills specifically advise that cleaning with a wet sponge or disposable toweling immediately after cooking is completed will greatly expedite and facilitate the cleaning process of the grilling surfaces and will obviate the need for more aggressive soap and water scrubbing otherwise. Human nature being as it is, this recommended cleaning step immediately after cooking is typically ignored based, in all likelihood, on the uncontrollable urge to immediately begin consuming the newly-cooked food and the inherent risk involved with handling extremely hot surfaces.

These grilling surfaces, when left to cool with food particles and juices remaining thereon are extremely difficult to clean. A mere sponge or wet paper towel wiping no

longer suffices and more aggressive techniques for cleaning and scouring these grilling surfaces must be used.

The following U.S. patents are generally related to this area of grill cooking and protection thereof but all have structural and functional features which are substantially differing from that of the present invention.

U.S. Patent No. 5,586,491 to Diller, et al.

U.S. Patent No. 5,447,097 to Rhee

U.S. Patent No. 4,320,699 to Binks

U.S. Patent No. 4,794,052 to Morrison

U.S. Patent No. 6,101,931 to Miklos

U.S. Patent No. 6,547,601 to Chappell

U.S. Patent No. 6,313,446 to Jones

U.S. Patent No. 4,184,421 to Ahlgren

U.S. Patent No. 5,279,277 to Barker

The present invention provides disposable cooking grill liners which are preformed to specifically fit and easily mate against and conform to each of the stationary and moveable grilling surfaces of a GEORGE FOREMAN-type grill. Moreover, by the very nature of this close fitting alignment, the grill liner for the movable upper grilling surface will remain in place when opened. These cooking grill liners are formed of heavier aluminum foil having stiffened or, preferably doubled over rigidized outturned or upturned margins which aid in maintaining the overall preformed shape for mating alignment and fitting against each of the grilling surfaces and also facilitate the handling and disposal thereof after use.

BRIEF SUMMARY OF THE INVENTION

This invention is directed to a pair of disposable electric cooking grill liners for protecting the grilling surfaces of an electric cooking grill having two pivotally connected heated grilling members. Each grilling surface has raised cooking ribs and is heated and wherein both sides of food placed between the closed grilling surfaces are simultaneously heated. Each grill liner is formed of a heat-conductive sheet of semi-rigid or heavy aluminum foil preformed for fitting directly against and substantially conforming to and covering the corresponding grilling surface whereby cooking heat provided to each grilling surface is substantially transferred through the grilling liner. Food and juices flowing therefrom do not come in contact with the grilling surfaces thereby. Each grill liner preferably also has a stiffened or rigidized outturned and preferably reversed margin preferably formed of multiple layers of foil folded over on itself for maintaining the preformed shape during installation, use and removal of each said grill liner after use. Locking tabs and a juice collector are also provided.

It is therefore an object of this invention to provide a disposable cooking grill liner for each of the grilling or cooking surfaces of a GEORGE FOREMAN-type grill.

Still another object of this invention is to substantially eliminate the need for cleaning grilling surfaces of electric cooking grills having matable lower stationary and upper pivotably openable grilling surfaces each of which are electrically heated for rapid cooking of both sides of food placed there between.

In accordance with these and other objects which will become apparent hereinafter, the instant invention will now be described with reference to the accompanying drawings.

BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S)

Figure 1 is a perspective view of a prior art GEORGE FOREMAN-type grill with the moveable or upper grilling surface in the open position.

Figure 2 is a front elevation broken view of the cooking grill shown in Figure 1 with a disposable electric cooking grill liner fitted over and covering each of the grilling surfaces.

Figure 3 is a top plan view of the preferred cooking grill liner of the present invention shown in Figure 2 covering the moveable upper grilling surface.

Figure 4 is a section view in the direction of arrows 4-4 in Figure 2.

Figure 5 is an interrupted section view in the direction of arrows 5-5 in Figure 3.

Figure 6 is a modified section view in the direction of arrows A-A in Figure 2 showing an alternate and preferred embodiment **12'** of the invention.

DETAILED DESCRIPTION OF THE INVENTION

Referring now to the drawings, and firstly to Figure 1, a typical prior art electric cooking grill for use in conjunction with the present invention is there shown generally at letter **A**. This cooking grill **A**, commonly known under one trademark as a GEORGE FOREMAN grill, includes a stationary lower grilling member **B** and a moveable upper grilling member **C** which are pivotally connected together about a horizontal axis shown and pivotable in the direction of the arrow to a closed position atop a piece of food placed atop a stationary lower grilling surface **D** of the stationary grilling member **B**.

The grilling surface **D** having spaced parallel cooking ribs **E** upwardly extending therefrom. An upturned perimeter or flange **F** is provided to retain splattering juice and heat when the moveable cooking member **C** is closed atop the food. The stationary

grilling member **B** has a support structure so that, when placed atop a horizontal surface **S**, the grilling surface **D** is slightly inclined toward the lowest margin **G** of the grilling surface **D** whereby unwanted cooking juices will flow over and downwardly therefrom into a collector (not shown). The lower end of each rib **E** is enlarged at **L** to keep cooking food from sliding from atop the downwardly sloping grilling surface **D**.

The moveable upper grilling member **C** also includes a grilling surface **H** and longitudinally extending spaced parallel ribs **J** which opposingly mate with the ribs **E** of the stationary grilling member **B**. A downturned flange or perimeter **K** is provided to opposingly mate with the upturned flange **F** to substantially confine both splattering juices and heat between the grilling surfaces **H** and **D**.

When this cooking grill **A** is in use, electrical current activates electric heating elements (not shown) within each of the stationary and moveable grilling members **B** and **C** to effect cooking of the food from both top and bottom of the food surfaces for more uniform, expedited cooking.

Referring now to Figures 2 to 5, the present invention is there shown generally at numerals **10** and **12**. Each of these disposable grill liners **10** and **12** are preformed from semi-rigid or heavier aluminum foil preferably having a thickness in the range of 0.003" (3 mils) or even greater. Typically, lightweight aluminum foil having a thickness of 0.001" (1 mil) may also be used but the enhanced flexibility of lightweight foil for other uses makes the heavier, more rigid aluminum foil preferred.

Each of the grill liners **10** and **12** is preformed having longitudinal ribs **16** and **26**, respectively, and valleys **14** and **30** having a cross sectional configuration creating mating heated surfaces **22** and **34** which substantially and closely mate against, align with, and

cover these corresponding cooking ribs **E** and **J** of the cooking surfaces **D** and **H** as previously described.

Each of the grill liners **10** and **12** also includes upturned perimeter walls **21** and **32**, respectively, which are also preformed to closely mate against the side walls or flanges **F** and **K**, respectively. Note the importance of the closely mating preformed configuration of these disposable grill liners **10** and **12** against the heated cooking surfaces **D** and **H**, respectively, which serves to insure not only the proper fitting and positioning of these grill liners **10** and **12** during use, but also helps to insure better heat transfer from the grilling surfaces **D** and **H** without excess heat loss or heat transfer loss, and retention of the upper grill liner **12** when the movable upper grill member **C** is opened after cooking is complete.

Rigidized or stiffened perimeter flanges best seen in Figures 4 and 5 at **18** and **28** are preferably also provided and formed of doubled layers of the perimeter material which grip the flanges **F** and **K** at **40** and **29**, respectively, of each of the grill liners **10** and **12**. These rigid perimeters **18** and **28** further enhance the shape-keeping abilities of the relatively lightweight aluminum foil used to fabricate the preformed grill liners **10** and **12**. However, a heavier or thicker aluminum foil material may have sufficient stiffness to eliminate this doubled-over margin feature although not preferred. Note that these preferably rigid or stiffened outer margins **18** and **28** must be configured so as not to inhibit the closure of the grilling surfaces **D** and **H**; however, the thickness of the food typically maintains these grilling surfaces **D** and **H** spaced apart so that the rigidizing perimeters **18** and **28** may extend over the edges of the side walls **F** and **K**.

The grill liner **10** utilized to cover the stationary lower grilling surface **D** also includes a juice collector **23** in the form of a trough as best seen in Figures 2 and 4 over surface **20** so that the inner mating surface **22** against the corresponding downturned drainage surface **G** in Figure 1 will allow the food juices to flow there into without substantial contact with this portion **G** of the grilling surface **D**. Note that conventional manufacturing forming processes stretch sheet aluminum foil material at region **36** which matingly covers each of the rib enlargements **L** beyond elastic limits to form holes or tears at **36** which do not affect product performance.

Obviously, after use and cooled, each of the disposable grill liners **10** and **12** may be easily removed aided by grasping of the rigidized or stiffened perimeters or margins **18** and **28** for proper disposal thereafter leaving the grilling surfaces **D** and **H** substantially clean for reuse.

Referring now to Figures 1 and 6, an alternate and preferred embodiment of the grill liner **12'** for the moveable grilling member **C** is there shown. Most of the mating features of this grill liner **12'** are substantially similar to those described with respect to the grill liner **12** shown, and are numbered the same as in Figures 2, 3, 5 and 6 and the detailed description thereof is hereby repeated by reference. However, it has been determined that the retention in place of the grill liner **12** may be compromised if the groove **29** as shown in Figure 5 which matably engages over the tapered flange **K** may not apply sufficient resilient frictional gripping pressure therearound.

To resolve this issue of less than fully reliable retention of the grill liner **12** against the grilling surface **H** and flanges **K** of the moveable cooking member **C**, the embodiment **12'** in Figure 6 includes an additional reverse flange portion **54** which is substantially

doubled over against the back or outer surface **V** of a distal flange portion **Ka** of flange **K**. A slot or gap **52** created by these overlapping flange portions **24** and **54** thus substantially mate against and grip both inner and outer surfaces of the flange **K**.

This alternate structure takes advantage of a gap **W** which exists between the concealed surface **V** of flange portion **Ka** and the mating lip **P** of the top cover **U** of the moveable cooking member **C**. Substantial retention force is achieved due to the outwardly sloping nature of flange portion **Ka** whereby the slot **52** and flange portions **24** and **54** mechanically lock this portion of the grill liner **12'** in place as shown.

To further enhance retention of the grill liner **12'** when the moveable grilling member **C** is lowered into or raised from the cooking position, flange **46** is also doubled over at **56** so as to create a tapered slot **48** which matably engages against a proximal flange portion **S** of flange **F** of the moveable grilling member **C**. Additionally, a locking tab **50** extending from the outer portion **56** is provided which slidably engages through slot **T** between the inner edge of the grilling member **C** and the pivot shaft housing **R** of the stationary grilling member **B**.

During use, to facilitate insertion of this locking tab **50** through slot **T**, the entire moveable grilling member **C** may be grasped and moved upwardly in the direction of the arrow in Figure 6 so as to enlarge this slot **T** temporarily for easier insertion of this locking tab **50**. Thereafter, when released, the slot **T** reduces to its normal width.

By this arrangement, this embodiment of the grill liner **12'** is lockably engaged to the outer flange **K**, to the inner flange **S** and within slot **T** whereby, when the moveable grilling member **C** is lowered in the direction of the arrow in Figure 1 for cooking food, or opened, the grill liner **12'** remains fully in place against the grilling surface **H**. To insure

safe handling, a rolled perimeter margin shown at **58** and **60** and along the entire perimeter margin of the grill liner **12'** is preferred.

Referring now to Figures 3 and 5, yet another alternate and now preferred embodiment of the grill liner for the moveable grill member **C** is shown at **12"**. Again, most of the structural features of this grill liner **12"** are substantially similar to those described with respect to the grill liner **12** and are correspondingly numbered. Representing another and simpler approach to the retention problem previously described with respect to the embodiment **12'** of Figure 6, this embodiment **12"** includes attaching tabs **70** and **72** integrally formed with or attached into a unit to the single sheet of heavy aluminum foil used to form this grill liner **12"**.

Each of the attaching tabs **70** and **72** include a means for releasable attachment thereof onto the outer surface **Y** shown in Figure 1 of the top cover **U**. Attaching tab **70** includes a strip of double-sided adhesive tape **74** which, when pressed in the direction of the arrow will releasably attach to the area **Y** of top cover **U**. Locking tab **72** alternately includes one part **76** of a two-part VELCRO arrangement which, when moved in the direction of the arrow, will releasably attach to the other part (not shown) of the VELCRO releasable attaching arrangement which is adhesively attached to the area **Y** of cover **U**.

By this arrangement, after the grill liner **12"** has been fitted onto the upper grilling surface **H**, these attaching tabs **70** and **72** are then folded over and releasably attached to the side area **Y** of the top cover **U** to fully secure the grill liner **12'** during opening and closing movement of the moveable grilling surface **H** during cooking operations.

While the instant invention has been shown and described herein in what are conceived to be the most practical and preferred embodiments, it is recognized that

departures may be made therefrom within the scope of the invention, which is therefore not to be limited to the details disclosed herein, but is to be afforded the full scope of the claims so as to embrace any and all equivalent apparatus and articles.